Our Case Number: ABP-318802-24

Planning Authority Reference Number:

An Coimisiún Pleanála

Martin G Jennings & Associates
The Estuary
Carrigaline
Cork

Date: 24 November 2025

Re: Proposed development of a resource recovery centre (including waste-to-energy facility) in Ringaskiddy, County Cork.

Dear Sir / Madam,

An Coimisiún Pleanála has received your recent submission in relation to the above mentioned proposed development and will take it into consideration in its determination of the matter. Please accept this letter as a receipt for the fee of €50 that you have paid.

The Commission will revert to you in due course with regard to the matter.

Please be advised that copies of all submissions / observations received in relation to the application will be made available for public inspection at the offices of the local authority and at the offices of An Coimisiún Pleanála when they have been processed by the Commission.

More detailed information in relation to strategic infrastructure development can be viewed on the Commission's website: www.pleanala.ie.

If you have any queries in the meantime please contact the undersigned officer of the Commission. Please quote the above mentioned An Coimisiún Pleanála reference number in any correspondence or telephone contact with the Commission.

Yours faithfully,

Kevin McGettigan

Kevin McGettigan
Executive Officer
Direct Line: 01-8737263

PA04

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OBJECTION

Proposed Ringaskiddy Resource Recovery Centre

Indaver Ireland Ltd. – Waste-to-Energy Facility

Planning Reference: PA0045 / 318802

Martin Jennings

Martin G Jennings & Associates

Consulting Engineer

The Estuary, Carrigaline, Co. Cork

Date: 17th November 2025

Introduction

We refer to the reactivated Planning Application by Indaver Ireland Ltd. This is a long running proposal to build a Resource Recovery Centre/Waste to Energy Incinerator at Ringaskiddy, Co. Cork. The development proposes to treat 240,000 tonnes per annum of residual waste including a limited amount of hazardous waste. There is overwhelming local opposition and complex legal history to this project. We note that Permission (PA0045) for this development was granted in May 2018 and later quashed in March 2021 by the High Court for objective bias and the case remitted under new case number 318802.

Rejection Submission

We submit this objection regarding Indaver Ireland Ltd.'s proposed Resource Recovery Centre at Ringaskiddy, Co. Cork. While recognising the need for effective waste management, we raise several issues of concern that must be addressed to ensure environmental, health, and social safeguards. We consider that that the issues raised are not adequately considered in previous and current planning application. Accordingly, we object to Invader proposal to construct a waste to energy incinerator at Ringaskiddy, Co. Cork.

Air Quality & Health

We note that the Environmental Impact Statement includes a chapter on Air Quality. Best practice requires rigorous baseline monitoring and cumulative impact assessment. We request independent air-quality monitoring, real-time emissions data publication, and assurance that exceedances trigger immediate action. The proximity of residential, educational, SAC, tourism and sensitive receptors underscores the need for stringent controls.

Air-Quality Concerns are as follows:

1. Emissions of Pollutants

Even under modern standards, incinerators release a mix of pollutants, including:

a) Particulate Matter (PM2.5 and PM10)

- Very small particles that can travel deep into the lungs.
- Linked to asthma, cardiovascular disease, stroke, and premature mortality.
- Even low levels have *no safe threshold*, according to WHO.

b) Nitrogen Oxides (NOx)

- Contribute to smog and respiratory irritation.
- Can worsen asthma and reduce lung function.

c) Acid Gases

Hydrogen chloride (HCl) and sulphur dioxide (SO_2), which can:

- Irritate the respiratory system.
- Contribute to acid deposition.

d) Heavy Metals

Including:

- Mercury
- Lead
- Cadmium These can accumulate in soil and water and pose long-term health risks if emitted in sufficient quantities.

e) Dioxins and Furans

These are among the *most persistent* and *toxic* pollutants:

- Can bioaccumulate in the food chain (especially in fish, dairy, and meat).
- Linked to cancers, reproductive issues, and immune system disruption.
- Even though modern plants use filtration, emissions are not zero and accidental releases can occur.

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2. Cumulative Impacts in Cork Harbour

Cork Harbour already hosts:

- Pharmaceutical industry emissions
- Port activity (ships, fuel combustion)
- Road traffic

The cumulative burden of an additional large emission source has not been fully assessed, especially for downwind towns like:

- Cobh
- Passage West
- Monkstown
- Carrigaline
- Ringaskiddy Village

Prevailing south-west winds, cyclones & anticyclones, could blow emissions inland toward population centres.

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3. Accident / Malfunction Risks

The main accident risks are as follows:

- Filter failure
- Start-up and shut-down periods (highest emissions)
- Waste mix variations

These situations can massively increase unfiltered or partially filtered emissions.

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4. Proximity to Schools and Residential Areas

The site is very close to:

- Maritime College
- Residential areas in Ringaskiddy
- Heavily used coastal areas (walkers, swimmers, sailors)

This violates the precautionary principle, particularly given:

- The site's low-lying position
- Air inversion risks in the harbour

Air inversions can trap pollutants near ground level instead of dispersing them.

5. WHO and European Health Guidance

Even if the plant meets EU emission limits, WHO guidance states that:

- No level of PM2.5 exposure is considered safe.
- Health impacts occur even below legal thresholds.

We would argue that "compliance with limits" does not equal "no health risk."

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6. Monitoring Concerns

We express our concerns that:

- Real-time public monitoring may not be guaranteed.
- Emission limits are based on periodic sampling, not continuous measurements.
- Some substances (like dioxins) are **not** monitored continuously anywhere in the world — only periodic snapshots are taken.

Short-term spikes may go undetected.

Key Health Concerns

Health concerns associated with emissions from waste-to-energy incinerators like the proposed Indaver facility at Ringaskiddy are as follows:

1. Particulate Matter (PM2.5 & PM10)

These are the *most consistently linked* to health impacts.

Health effects:

- Asthma attacks and chronic bronchitis
- Heart disease and stroke
- Reduced lung development in children
- Increased premature mortality **(well-established in long-term studies)**
- No safe exposure level **according to the WHO**

PM2.5 is particularly dangerous because the particles are tiny enough to enter the bloodstream.

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2. Nitrogen Oxides (NOx)

Produced during combustion and harmful even at low levels.

Health effects:

- Respiratory irritation
- Worsened asthma symptoms
- Reduced lung function over time
- Contributes to ground-level ozone and smog, which further harm respiratory health

Children, older adults, and people with asthma are most at risk.

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3. Dioxins and Furans

These are toxic, persistent organic pollutants formed when waste is burned. Even very small amounts are concerning.

Health effects:

- Increased cancer risk
- Reproductive and fertility problems
- Immune system suppression
- Hormone (endocrine) disruption
- Developmental problems in children

They accumulate in body fat and in the food chain (especially dairy, meat, fish), so long-term exposure is the issue.

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4. Heavy Metals

Examples: mercury, cadmium, lead, chromium, arsenic.

Health effects:

- Mercury → neurological damage, especially in children and developing foetuses
- Lead → lowered IQ in children, behavioural problems, cardiovascular effects
- Cadmium → kidney damage, bone disease, cancer risk
- Arsenic → skin lesions, cancer, cardiovascular issues

Even with filtration, small quantities can still be released.

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5. Acid Gases (HCl, SO_2)

These irritate the airways and can trigger breathing difficulties.

Health effects:

- Worsening of asthma
- Coughing, throat irritation
- Increased hospital admissions for respiratory illness
- Long-term chronic respiratory problems at higher exposure

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6. Ultrafine Particles (UFPs)

These are even smaller than PM2.5 and can penetrate deep into organs. They are not regulated and often not monitored.

Health effects:

- Inflammation throughout the body
- Potential cardiovascular and neurological effects
- Possible link to dementia, though research is ongoing

Ultrafine particles travel long distances and are easily inhaled.

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7. Combined & Long-Term Exposure

A major concern is cumulative exposure to a mixture of pollutants. Even if each pollutant is within legal limits, combined exposure can cause:

- Increased asthma prevalence
- Greater risk of chronic obstructive pulmonary disease (COPD)
- Higher cardiovascular disease risk
- More respiratory infections in children
- Long-term increased cancer risk (largely due to dioxins and some metals)

Legal compliance ≠ no health risk. WHO guidelines are often stricter than EU limits because research continues to show harm at lower concentrations.

8. Vulnerable Groups

Certain groups are much more at risk **from emissions:**

- Children **(developing lungs; higher breathing rates)**
- Pregnant women and foetuses
- Older adults
- People with asthma, COPD or heart disease
- People living close to the facility

Cork Harbour's geography (low-lying, with inversion conditions) can trap pollutants, increasing exposures for nearby communities.

In Summary

The main health concerns relate to:

- Long-term exposure to fine particles, NOx, heavy metals, and dioxins
- Increased respiratory and cardiovascular illness
- Potential cancer risks and developmental impacts
- Particular risks for children and vulnerable groups
- Cumulative and unmonitored emissions (especially ultrafine particles and dioxins)

Hazardous Waste Handling

The project includes hazardous waste acceptance and treatment. Detailed waste characterisation, transport, storage and residue management plans are specific. We request clear definitions of hazardous waste types, comprehensive emergency response protocols, and transparent reporting on hazardous residues management.The key health and safety risks associated with handling hazardous waste at a waste-to-energy incinerator like the proposed Indaver facility in Ringaskiddy are as follows:

These risks are additional to normal incinerator emissions, because hazardous waste introduces more toxic and unstable materials into the system.

1. Increased Toxicity of Emissions

Burning hazardous waste can generate or release:

- Heavy metals

(e.g., mercury, lead, cadmium, chromium, arsenic)
These do not break down in combustion. They can be released as fine particles or settle in surrounding soil and water.

- Acid gases

(e.g., HF, HCl, SO_2)
More corrosive and irritating to the respiratory system.

- Dioxins and furans

Hazardous waste often contains chlorine-based materials, increasing the potential for formation of these highly carcinogenic compounds.

- Toxic organic compounds

(e.g., benzene, PAHs, PCBs)

These can survive combustion if temperatures or oxygen levels fluctuate.

Health concerns:

- Cancer
- Developmental and neurological damage
- Hormonal disruption
- Respiratory illnesses
- Cardiovascular disease

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2. Risk of Accidental Releases (During Handling & Storage)

Before waste even reaches the furnace, it must be delivered, stored and prepared.

Risks include:

- Spills or leaks during unloading

Hazardous liquids, sludges, or solvents can escape during waste transfer.

- Fires in storage areas

Hazardous waste can be reactive, flammable, **or** explosive:

- Solvents
- Industrial chemicals
- Contaminated oily rags
- Pharmaceutical residues

A fire can release large quantities of toxic smoke far beyond normal emissions.

- Mixing incompatible wastes

This has caused serious accidents at other incinerators worldwide:

- Violent chemical reactions
- Toxic gas generation
- Spontaneous combustion

- Tank or container rupture

Especially if pressure builds inside containers or if waste is improperly classified.

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3. Worker Safety Risks

Handling hazardous waste exposes staff to:

- Toxic vapour inhalation
- Chemical burns
- Skin absorption of solvents and metals
- Respiratory damage
- Accidental needle-stick injuries (from clinical waste)
- Long-term risks from chronic low-level exposure

Inadequate PPE or ventilation greatly increases these risks.

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4. Increased Risk During Start-Up, Shutdown, or Malfunctions

Hazardous waste magnifies risks when:

- The furnace is not yet at optimal temperature
- Filters and scrubbers are not fully operational
- There are power failures or equipment faults

These events can cause large uncontrolled emissions.
Some of the worst recorded emissions events at incinerators internationally occurred during abnormal operation, not normal running.

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5. Transportation Risks

Hazardous waste must be brought to Ringaskiddy by road.
Risks include:

- Traffic accidents involving chemical cargo
- Spills on local roads
- Exposure to fumes after an accident
- Fires or explosions involving hazardous loads

The N40 dual carriageway from Bandon Road Interchange (N71) to Dunkettle Interchange (M8/M25) is notorious for traffic accidents. All hazardous waste from the greater Munster District will access the incinerator in Ringaskiddy via the above mentioned stretch of national roadway. Ringaskiddy already has significant HGV traffic due to pharma, port activity and chemical plants. Hazardous waste deliveries will further add to the burden.

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6. Long-Term Environmental Contamination

Even small quantities of hazardous waste emissions can accumulate over years:

- Mercury in fish (bioaccumulation)
- Lead and cadmium in soil and vegetables
- Dioxins in dairy, meat and breast milk

Health risks from long-term accumulation include:

- Cancer
- Immune dysfunction
- Reproductive harm
- Neurological damage in infants and children (especially from mercury & lead)

Cork Harbour's sheltered topography increases the concern for local deposition.

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7. Emergency Response Challenges

If something goes wrong with hazardous waste:

- Fire brigades must manage toxic smoke
- Harbour winds can spread pollutants toward residential areas
- Evacuation plans must be prepared for communities like Cobh, Monkstown, Ringaskiddy Village, Carrigaline

We would argue that emergency planning for this site is inadequate given:

- Coastal storms
- Flooding risk
- International shipping activity
- High nearby population density

In Summary

Handling hazardous waste at the proposed Invader incinerator introduces additional risks because the materials are more toxic, more reactive, and more persistent. The main concerns are:

- Higher toxicity of emissions
- Risk of chemical spills or fires
- Worker exposure
- Transportation hazards
- Long-term contamination
- Increased danger during malfunctions

These concerns are especially relevant in Cork Harbour, where dispersion conditions and population proximity increase potential exposure.

Site Location

The proposed site selection dates back to 1999-2000. The main site selection criteria was its location in close proximity to the hazardous waste producers in Cork Harbour and availability of land at the time. Considerable policy, technology, transport infrastructure (road and rail) and waste flow management have changed significantly in the past 25 years. Accordingly, we would argue that the alternative sites considered is outdated and a fresh site selection aisolated from built up residential areas is warranted considering the above mentioned criteria and current policy and standards.

Location Suitability

The Ringaskiddy site is within a coastal, flood-prone, SAC and visually sensitive area of Cork Harbour. The cumulative impact on landscape, recreation, tourism, marine habitats and flood resilience must be reconsidered. Less sensitive sites should be assessed in accordance with Local, Regional and National Planning Guidance.

Traffic & Transport

The facility's HGV traffic implications require reassessment using current (2025) baseline data. Clear routing, time-of-day restrictions, and infrastructure upgrades should be mandatory. Post-construction monitoring should be required to ensure compliance.

Climate & Waste Hierarchy

Under the Waste Action Plan for a Circular Economy (2020), prevention, reuse and recycling take precedence over incineration. The project risks locking in residual waste generation. The applicant should demonstrate alignment with circular economy targets and provide a transparent life-cycle carbon analysis.

Cumulative Impacts

Given existing industrial and port activities, full cumulative environmental and health impact assessment is essential. Combined emissions, noise, and traffic effects must be modelled and independently reviewed.

Alternatives & Need

The EIS should demonstrate that alternative sites and technologies were adequately evaluated and that national waste capacity data justify the scale of the facility. The 'do-nothing' scenario must also be included for comparison.

Legal & Procedural Considerations

Following the High Court's 2021 judgment quashing the prior approval, strict adherence to EIA, Aarhus Convention, and Industrial Emissions Directive requirements is essential. We request full transparency, independence, and accessibility of all submitted documentation and data.

Requested Actions

- Require comprehensive updated EIA and NIS reflecting new environmental data and policies.
- Ensure real-time public access to air-quality and emissions data.
- Impose clear limits on hazardous waste tonnage and enforceable environmental safeguards.
- **Consider refusal of permission unless the applicant demonstrates full compliance and no associated environmental and health risk.**

Closing Statement

We appreciate the opportunity to submit this **OBJECTION** and request that An Coimisiún Pleanála give full consideration to the concerns raised. Our intention is to support sustainable waste management that protects public health and the Cork Harbour environment.

Yours faithfully,

Martin Jennings
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The Estuary, Carrigaline, Co. Cork